BookletChart™

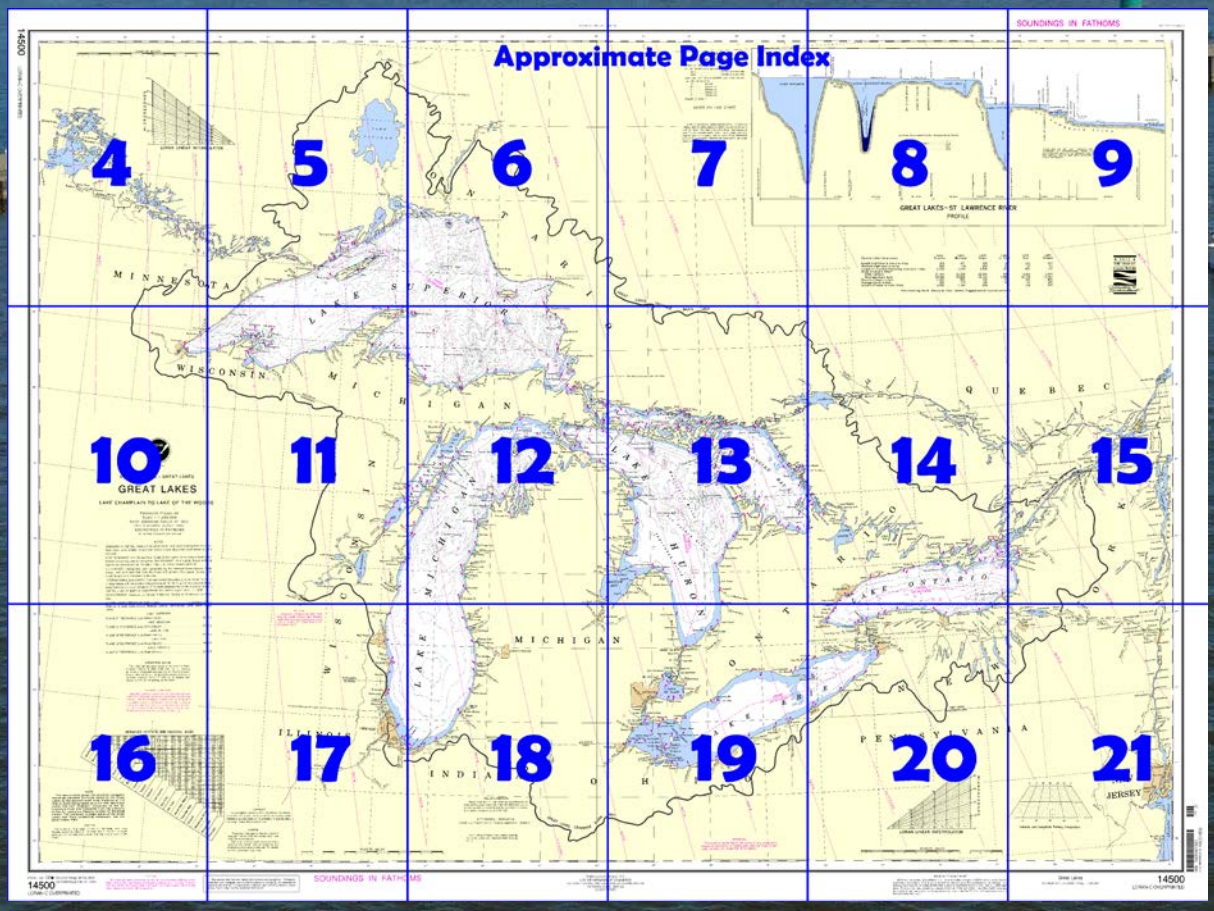
Great Lakes –
Lake Champlain to Lake of the Woods

NOAA Chart 14500

A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/coastpilot_w.php?book=6

(Selected Excerpts from Coast Pilot)
The **Great Lakes system** includes **Lakes Ontario, Erie, Huron, Michigan,** and **Superior**, their connecting waters, and the **St. Lawrence River**. It is one of the largest concentrations of fresh water on the earth. The system, including the St. Lawrence River above Iroquois Dam, has a total shoreline of about 11,000 statute miles (9,559 nm), a total water surface area of about 95,000 square statute miles (24,600,000 hectares), and a total drainage basin of almost 300,000 square statute miles (77,700,000 hectares). With the opening of the **St. Lawrence Seaway**, the system provides access by oceangoing deep-draft vessels to the great industrial and agricultural heartland of the North American continent. From the **Strait of Belle Isle** at the mouth of the **Gulf of St. Lawrence**, the distance via the St. Lawrence River to Duluth, MN, at the head of Lake Superior is about 2,340 statute miles (2,033 nm) and to Chicago, IL, near the south end of Lake Michigan is about 2,250 statute miles (1,955 nm). About 1,000 statute miles (870 nm) of each of these distances is below Montreal, the head of deepdraft ocean navigation on the St. Lawrence River.

Small craft and barge traffic may also reach the Great Lakes via two shallow-draft routes; from the Gulf of Mexico via the Mississippi River and the Illinois Waterway to Lake Michigan at Chicago, IL, a distance of about 1,530 statute miles (1,329.5 nm), and from New York Harbor via the Hudson River and the New York State Canal System to Lake Ontario at Oswego, NY, a distance of 340 statute miles (295.5 nm), or to the Niagara River at Tonawanda, NY, a distance of 496 statute miles (431 nm).

Navigation regulations.–The U.S. Coast Guard has established **vessel traffic reporting system** and related navigation regulations for the connecting waters from Lake Erie to Lake Huron. The reporting system is operated through the Canadian Vessel Traffic Service Center at Sarnia, ON (See **33 CFR 162.130 through 162.140**, chapter 2, for complete information.)

Vessel Traffic Management.–A **Vessel Traffic Management Contingency Plan (VTM)** for the Detroit and St. Clair Rivers has been agreed upon by the United States Coast Guard and the Canadian Department of Transport. The purpose of the system is to enhance the safety of navigation in the rivers during periods of exceptionally hazardous navigation conditions and to protect the navigable waters of the rivers from environmental harm. These objectives are accomplished by establishing criteria for allowing vessels to transit the system, by managing vessel entries and transits of the system, and by establishing no passing zones as required. The system is implemented only in cases of emergency, upon agreement of the Commander, U.S. Coast Guard Ninth District, and the Director, Central Region, Canadian Department of Transport. The implementation will be promulgated through Broadcast Notice to Mariners.

Danger zones.–Danger zones have been established within the area of this Coast Pilot. (See **33 CFR 334**, chapter 2, for limits and regulations.)

Pilotage.–By International agreement between the United States and Canada, the waters of the Great Lakes and the St. Lawrence River have been divided into designated and undesignated waters for pilotage purposes. In designated waters, registered vessels of the United States and foreign vessels are required to have in their service a United States or Canadian registered pilot. In undesignated waters, registered vessels of the United States and foreign vessels are required to have in their service a United States or Canadian registered pilot or other officer qualified for Great Lakes undesignated waters.

Vessel Arrival Inspections.–Quarantine, customs, immigration, and agricultural quarantine officials are stationed in most major U.S. ports. (See Appendix A for addresses.) Vessels subject to such inspections generally make arrangements in advance through ships' agents. Unless otherwise directed, officials usually board vessels at their berths.

Harbormasters are appointed for some of the principal ports. They have charge of enforcing harbor regulations, and in some instances are in charge of the anchorage and berthing of vessels.

U.S. Coast Guard Rescue Coordination Center
24 hour Regional Contact for Emergencies

RCC Cleveland	Commander 9th CG District Cleveland, OH	(216) 902-6117

Table of Selected Chart Notes

Corrected through NM Oct. 26/02
Corrected through LNM Oct. 15/02

WARNING

Unexploded ordnance has been found along the western shore of Lake Michigan. Anyone finding unexploded ordnance should notify the nearest U.S. Coast Guard or law enforcement facility.

For a listing of larger scale charts covering the Great Lakes see Nautical Chart Catalog No. 4.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

Low Water Datum elevations for the lakes are as follows:

Lake Superior	601.1
Lakes Michigan—Huron	577.5
Lake St. Clair	571.7
Lake Erie	569.2
Lake Ontario	243.3

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

ELEVATIONS ON THE LAKE SURFACES ARE AVERAGES EXPRESSED ON INTERNATIONAL GREAT LAKES DATUM (1985) AND ARE GIVEN TO THE NEAREST FOOT. HORIZONTAL AND VERTICAL SCALES HAVE BEEN DISTORTED TO CONVEY VISUAL IMPRESSION.

MAGNETIC VARIATION

Magnetic variation curves are for 2002 derived from 2000 World Magnetic Model and accompanying secular change. If annual change is in same direction as variation it is additive and the variation is increasing. If annual change is opposite in direction to variation it is subtractive and the variation is decreasing. Places of large local disturbances are indicated in magenta thus: ⊙

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

NOTE

The above table gives the shortest navigable distances between principal points on the Great Lakes to the nearest even mile; fractions of 1/2 mile or more being taken as a full mile and those under the half dropped. Distances on the St. Lawrence River are measured from the entrance to the St. Lawrence Seaway located at Montreal Harbor. For complete mileage tables of the Great Lakes and their connecting waterways, see the Great Lakes Pilot.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot 6 for details.

CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

LORAN-C

GENERAL EXPLANATION

LORAN-C FREQUENCY ..... 100kHz.

PULSE REPETITION INTERVAL

8970 ..... 89,700 Microseconds

9960 ..... 99,600 Microseconds

STATION TYPE DESIGNATORS: (Not individual station letter designators).

M ..... Master

W ..... Secondary

X ..... Secondary

Y ..... Secondary

Z ..... Secondary

EXAMPLE: 9960-Y

RATES ON THIS CHART

8970-X 8970-Y

9960-W 9960-X 9960-Y 9960-Z

Loran-C correction tables published by the National Imagery and Mapping Agency or others should not be used with this chart. The lines of position shown are based on assumed all seawater signal paths. Uncorrected positions may not meet the ¼ nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned to use larger scale Loran-C charts where possible.

AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

HYDROGRAPHY. Contours are shown in fathoms. Depths to 10 fathoms are tinted blue.

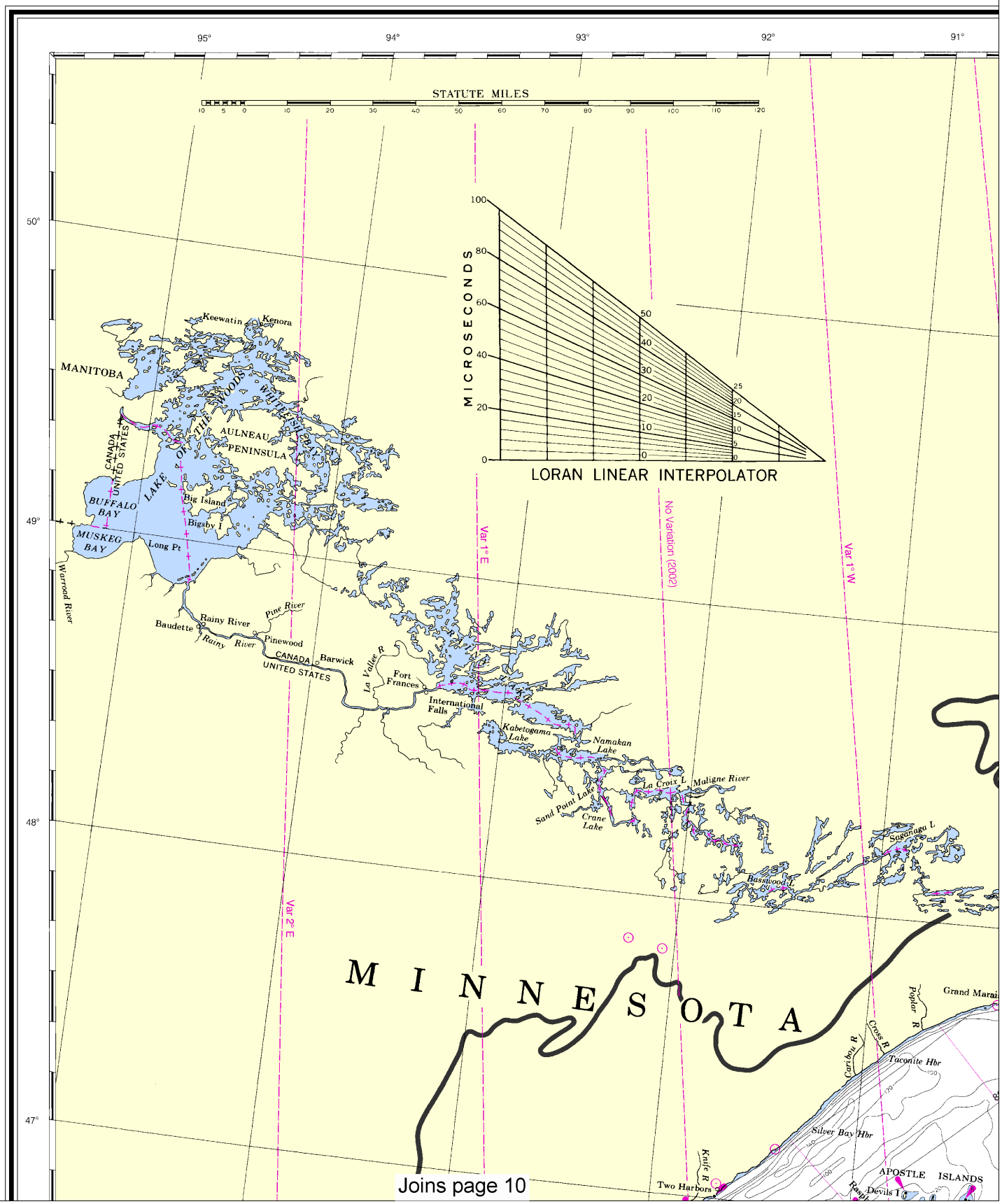
OMISSION OF DETAIL. Owing to the small scale, most aids to navigation and other detail have been omitted. Coast and harbor charts should be used where detail is required.

INTERNATIONAL BOUNDARY. The International Boundary Line as shown hereon is in accordance with the location adopted August 15, 1913 by the International Waterways Commission under Article IV of the treaty between the United States of America and the United Kingdom of Great Britain and Ireland signed April 11, 1908.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.

14500

LORAN-C OVERPRINTED



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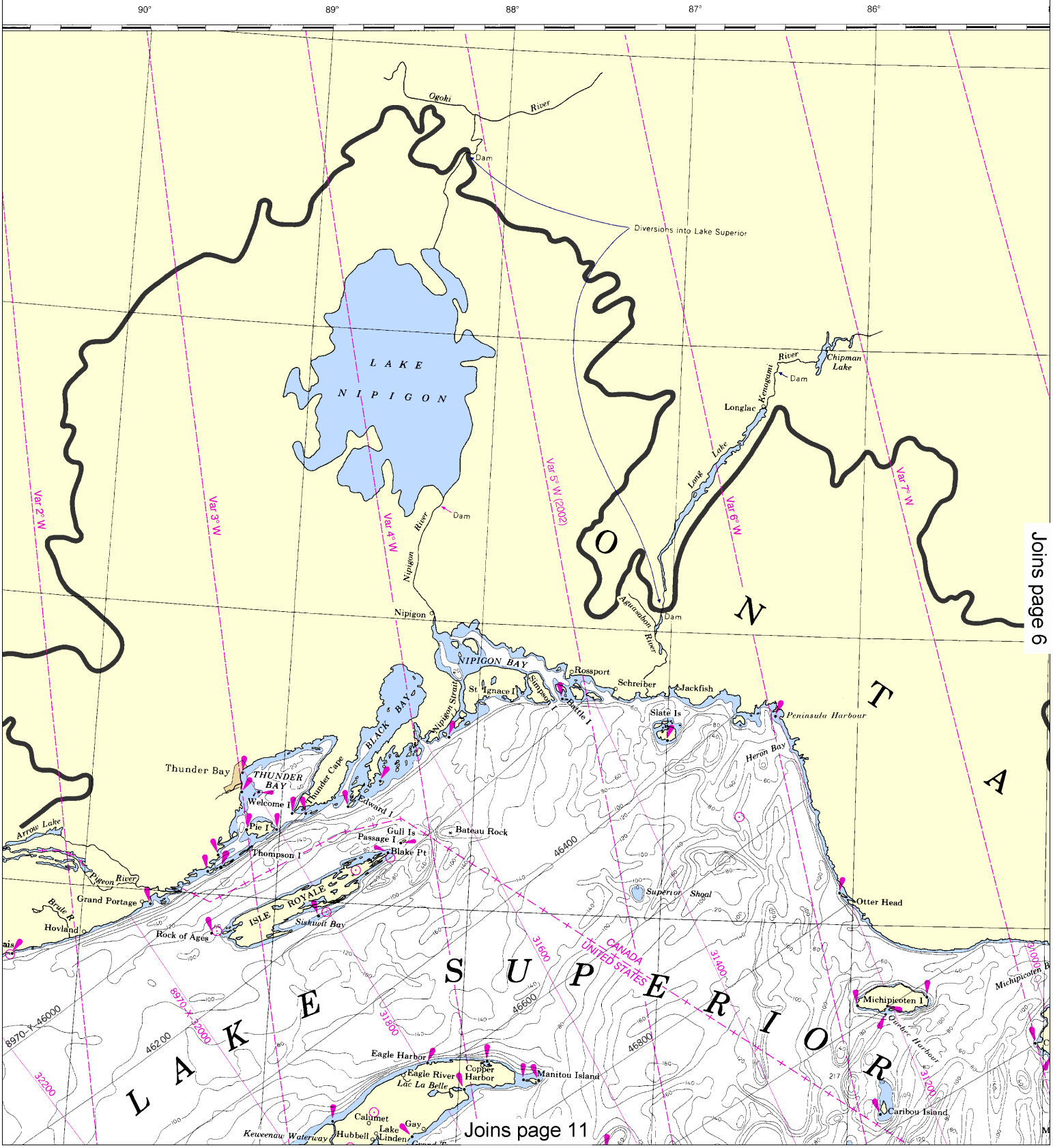
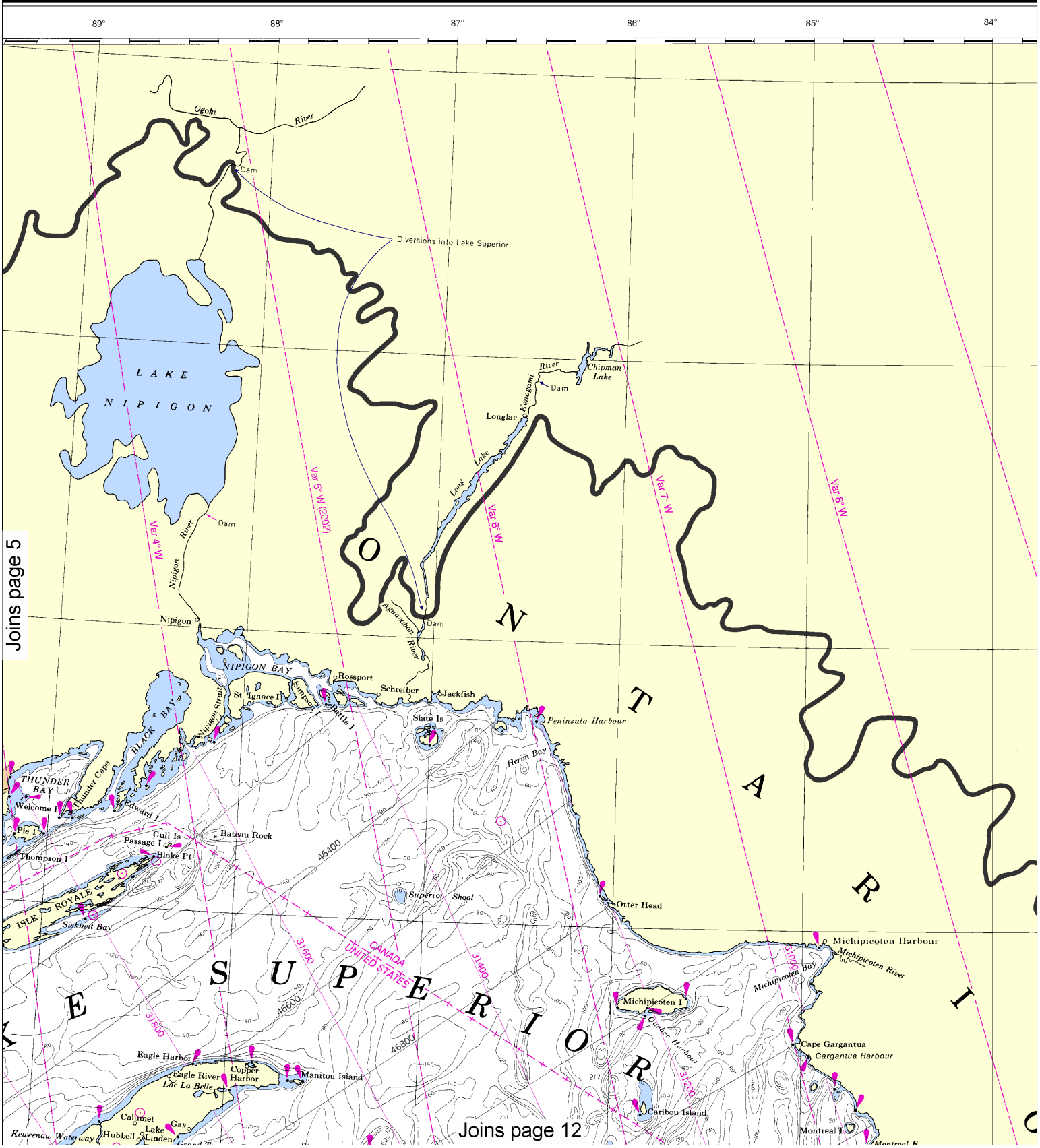
4

Note: Chart grid lines are aligned with true north.



This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:2000000. Barscales have also been reduced an
are accurate when used to measure distances in this BookletChart.



6

Note: Chart grid lines are aligned with true north.

83° 82° 81° 80° 79° 78

LORAN-C
GENERAL EXPLANATION

LORAN-C FREQUENCY ..... 100kHz.
PULSE REPETITION INTERVAL
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9960 ..... 99,600 Microseconds
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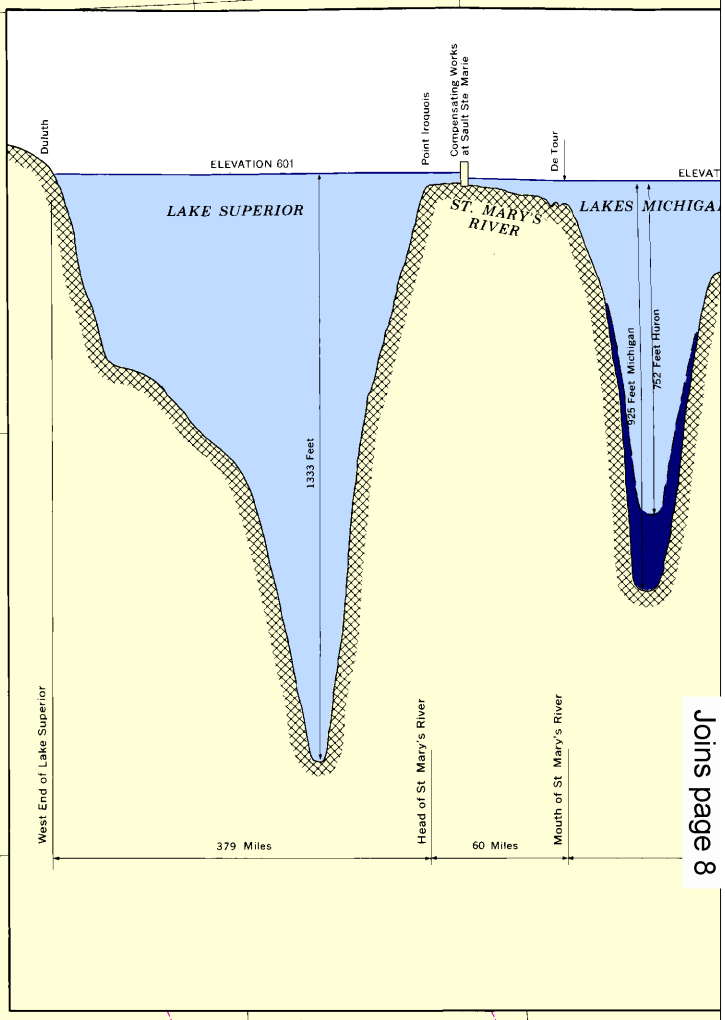
X ..... Secondary
Y ..... Secondary
Z ..... Secondary
EXAMPLE: 9960-Y

RATES ON THIS CHART

8970-X 8970-Y
9960-W 9960-X 9960-Y 9960-Z

Loran-C correction tables published by the National Imagery and Mapping Agency or others should not be used with this chart. The lines of position shown are based on assumed all seawater signal paths. Uncorrected positions may not meet the ¼ nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned to use larger scale Loran-C charts where possible.



Joins page 8

Var 9° W
Var 10° W (2002)
Var 11° W

GREAT LAKES DRAINAGE BASIN LIMIT

General Lak
Length (righ
Breadth (rig
Length of co
Areas in squ
Water sur
Drainage
Maximum d
Average dep
Volume of w

Joins page 13

82° 81° 80° 79° 78° 77°

LORAN-C
GENERAL EXPLANATION

LORAN-C FREQUENCY ..... 100kHz.
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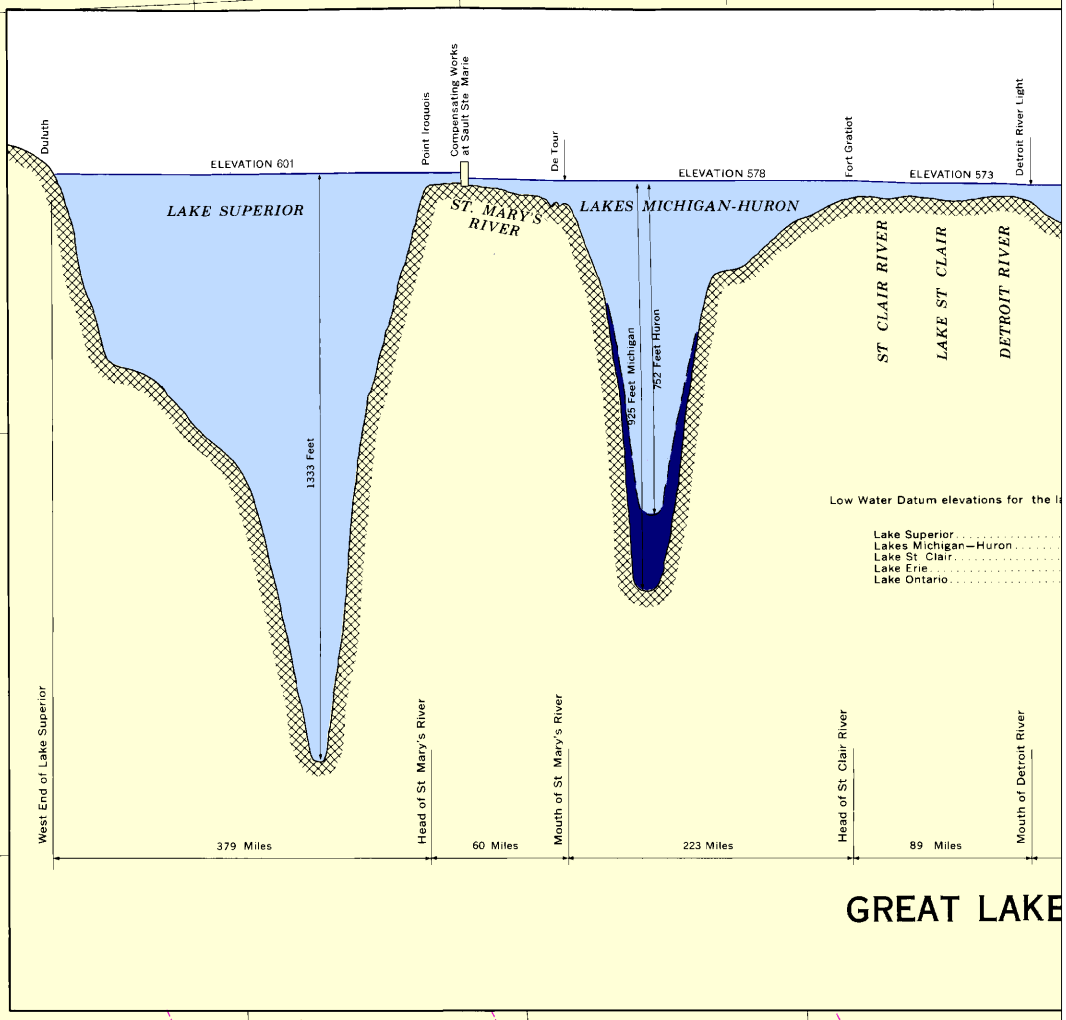

Joins page 7

Var 10° W (2002)

Var 11° W

General Lake Dimensions	Sup
Length (right line in clear) in miles	
Breadth (right line) in miles	
Length of coastline (including islands) in miles	2
Areas in square miles*	
Water surface	31
Drainage basin land	49
Maximum depth in feet	1
Average depth in feet	
Volume of water in cubic miles	2

*Not including the St Mary

GE BASIN LIMIT

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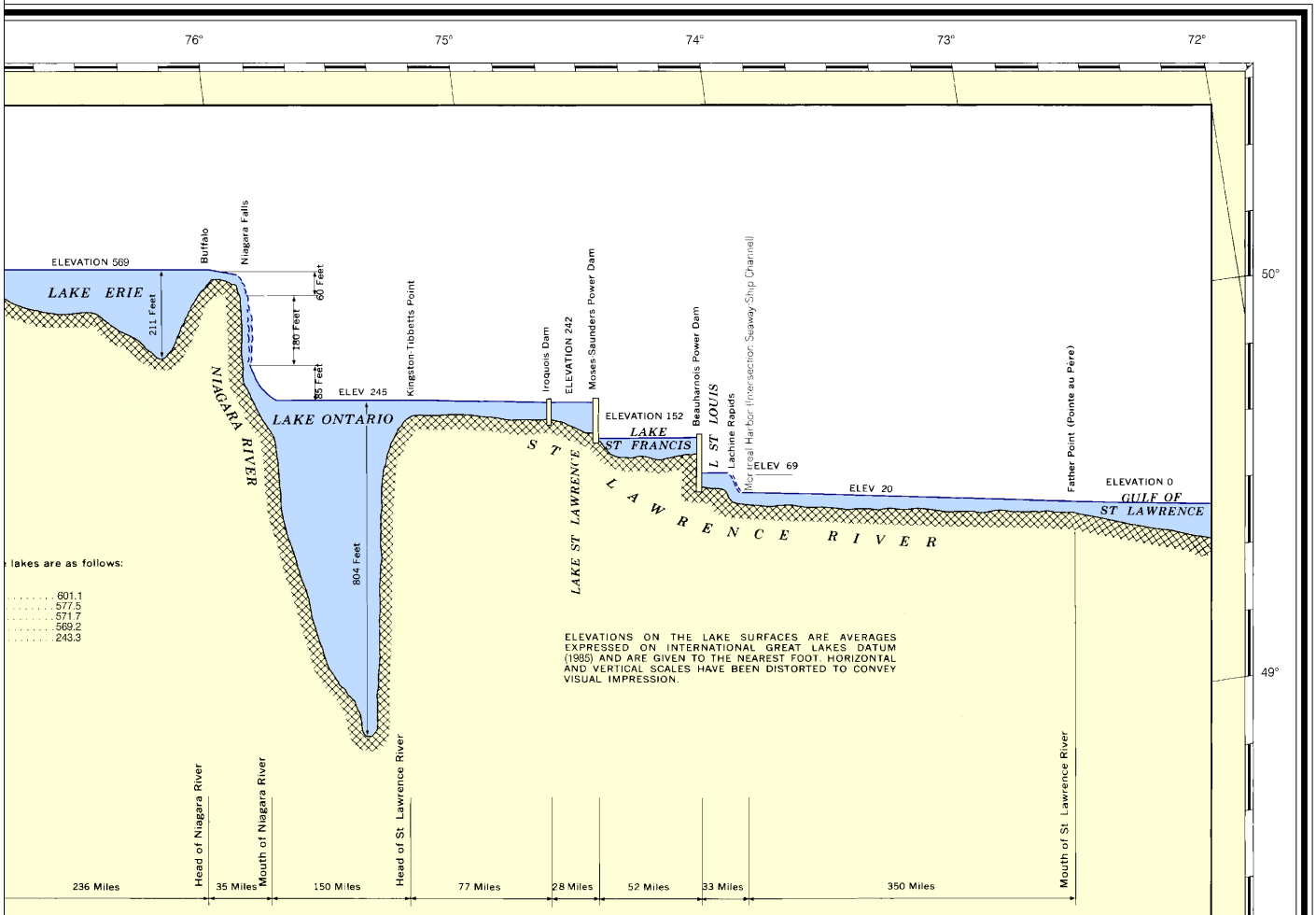
Note: Chart grid lines are aligned with true north.



ES–ST LAWRENCE RIVER

PROFILE

Lake uperior	Lake Michigan	Lake Huron	Lake St Clair	Lake Erie	Lake Ontario
350	307	206	26	241	193
160	118	183	24	57	53
2,730	1,640	3,830	257	871	712
1,700	22,300	23,000	430	9,910	7,340
9,300	45,600	50,700	4,800	22,700	23,400
1,333	923	750	21	210	802
489	279	195	10	62	283
2,935	1,180	849	1	116	393

y's, St Clair, Detroit, Niagara and St Lawrence Rivers

Var 17° W

★ 2002 ★
THE YEAR OF
CLEAN WATER
Celebration & Recommitment

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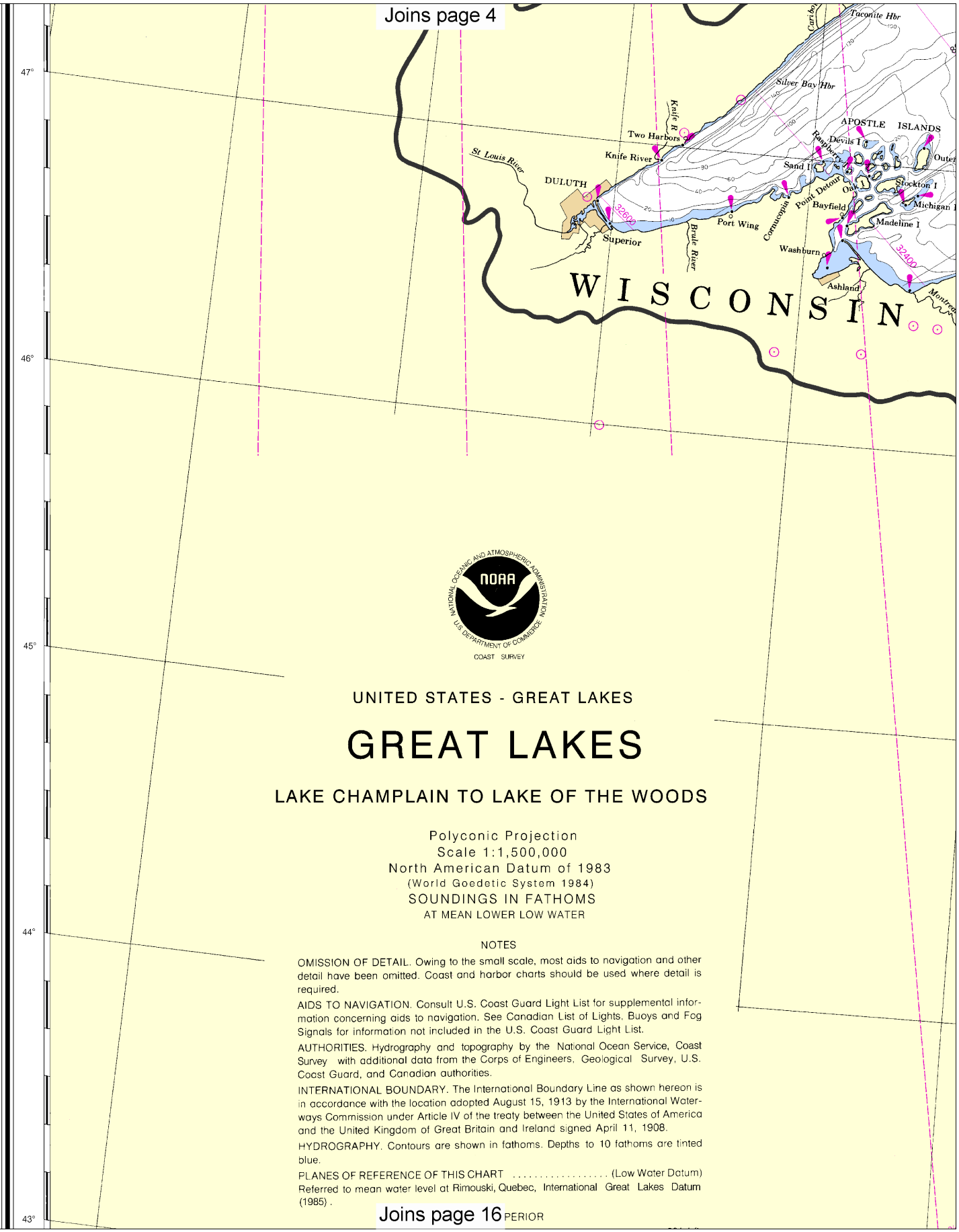
Joins page 4



NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE
COAST SURVEY

UNITED STATES - GREAT LAKES

GREAT LAKES

LAKE CHAMPLAIN TO LAKE OF THE WOODS

Polyconic Projection
Scale 1:1,500,000
North American Datum of 1983
(World Goedetic System 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

NOTES

OMISSION OF DETAIL. Owing to the small scale, most aids to navigation and other detail have been omitted. Coast and harbor charts should be used where detail is required.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.

AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

INTERNATIONAL BOUNDARY. The International Boundary Line as shown hereon is in accordance with the location adopted August 15, 1913 by the International Waterways Commission under Article IV of the treaty between the United States of America and the United Kingdom of Great Britain and Ireland signed April 11, 1908.

HYDROGRAPHY. Contours are shown in fathoms. Depths to 10 fathoms are tinted blue.

PLANES OF REFERENCE OF THIS CHART ..... (Low Water Datum)
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

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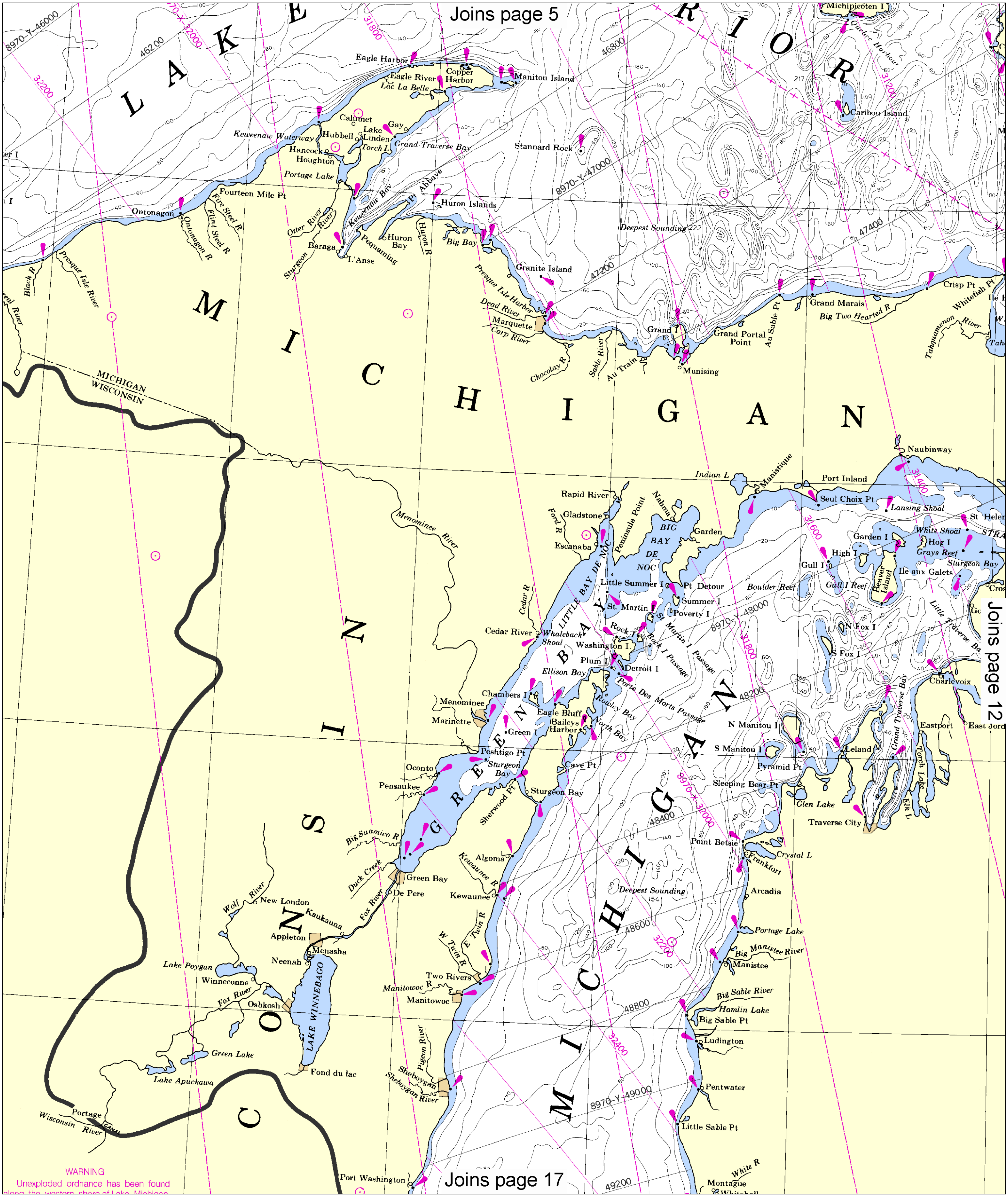
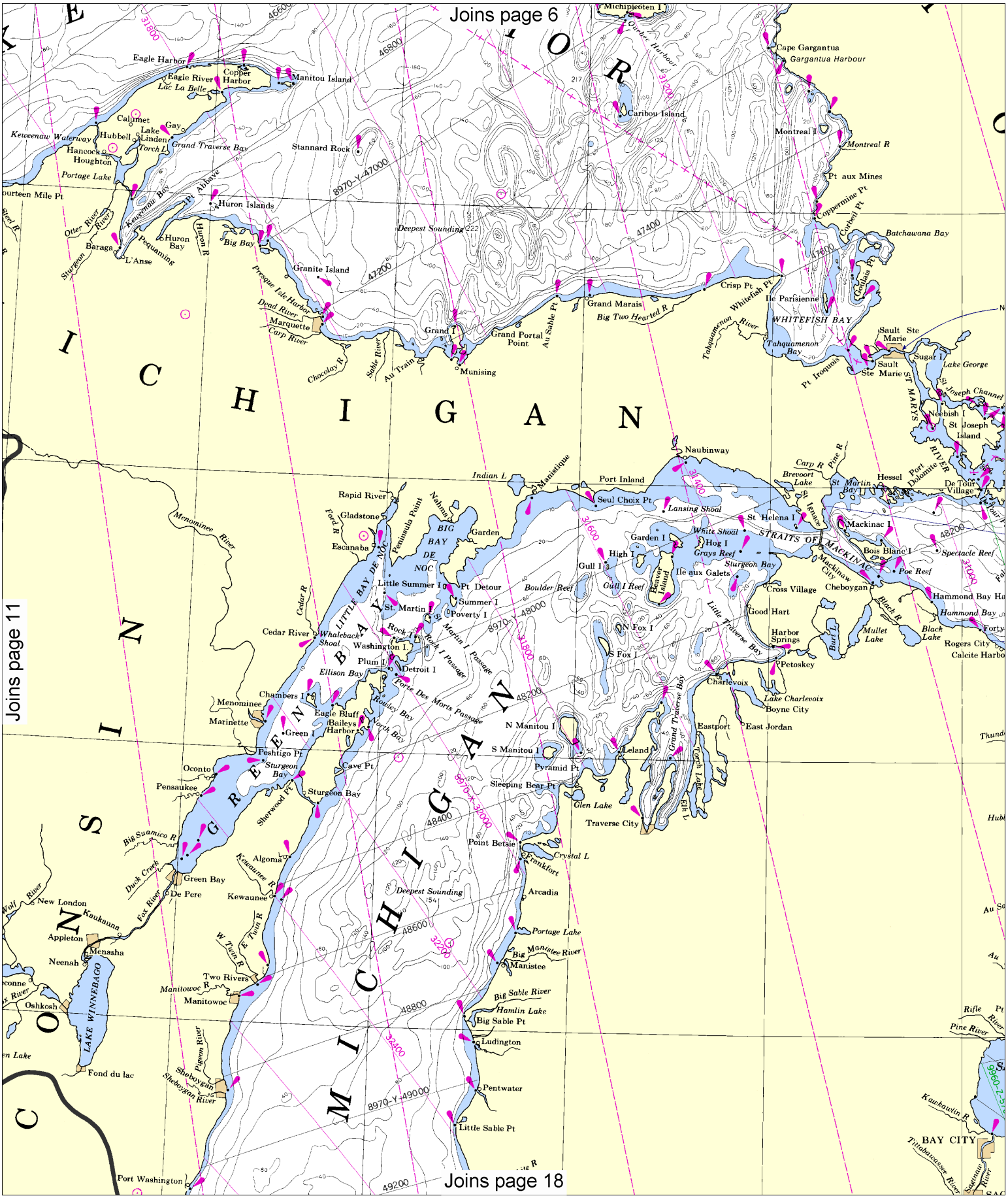
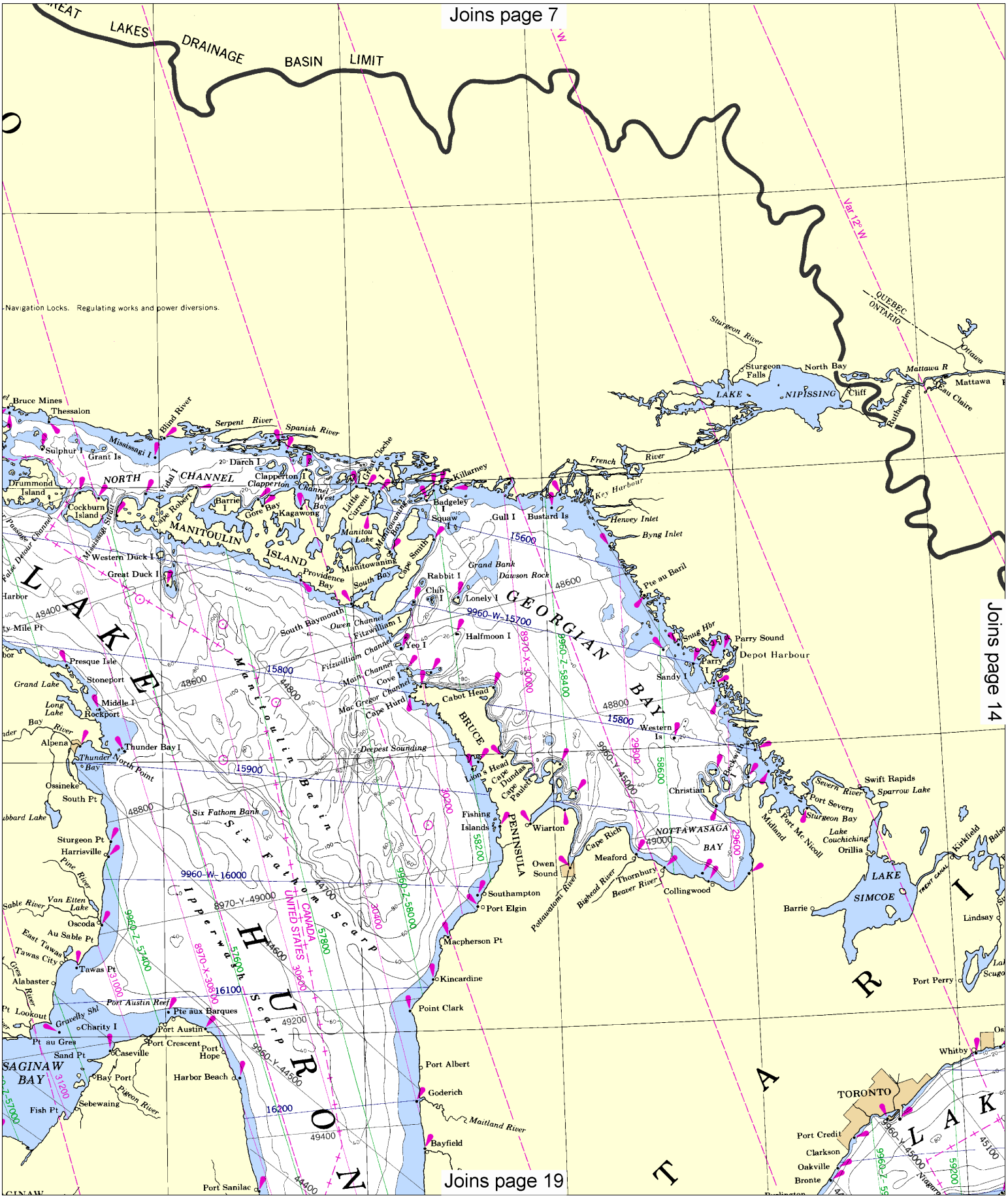
Note: Chart grid lines are aligned with true north.

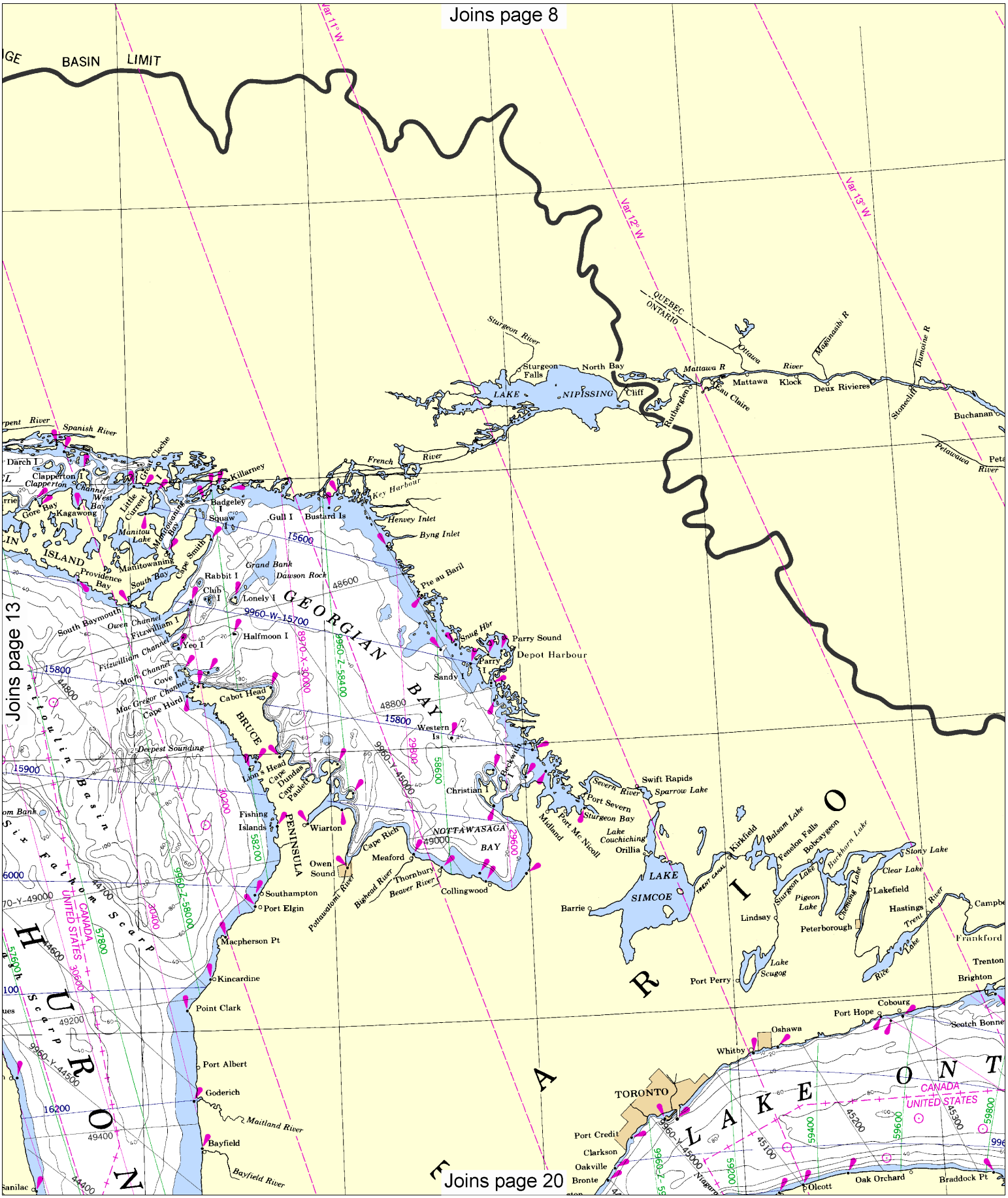

Joins page 5
Joins page 12
Joins page 17
LAKE SUPERIOR
MICHIGAN
WISCONSIN
LAKE MICHIGAN
GREEN BAY
BIG BAY DE NOC
LITTLE BAY DE NOC
Eagle Harbor
Eagle River
Copper Harbor
Lac La Belle
Manitou Island
Calumet
Hubbell
Lake Linden
Gay
Torch L
Grand Traverse Bay
Keweenaw Waterway
Hancock
Houghton
Portage Lake
Keweenaw Bay
Pt Abbaye
Huron Islands
Stannard Rock
Caribou Island
Michipicoten I
Fourteen Mile Pt
Ontonagon
Ontonagon R
Fire Steel R
Flint Steel R
Otter River
Sturgeon River
Baraga
L'Anse
Pequaming
Huron Bay
Huron R
Big Bay
Granite Island
Deepest Sounding 222
Presque Isle Harbor
Dead River
Marquette
Carp River
Chocolay R
Sable River
Au Train
Grand I
Munising
Grand Portal Point
Au Sable Pt
Grand Marais
Big Two Hearted R
Crisp Pt
Whitefish Pt
Tahquamenon River
Black R
Presque Isle River
MICHIGAN
WISCONSIN
Menominee River
Indian L
Manistique
Port Inland
Naubinway
Seul Choix Pt
Lansing Shoal
St Helena
White Shoal
Hog I
Garden I
High I
Grays Reef
Gull I
Gull I Reef
Beaver Island
Ile aux Galets
Sturgeon Bay
Boulder Reef
Rapid River
Gladstone
Ford R
Escanaba
Peninsula Point
Nahma
Garden
Little Summer I
Pt Detour
Summer I
Poverty I
St. Martin I
St Martin I Passage
Rock I
Rock I Passage
Washington I.
Plum I
Detroit I
Porte Des Morts Passage
Cedar River
Cedar R
Whaleback Shoal
Ellison Bay
Chambers I
Eagle Bluff
Baileys Harbor
Rowley Bay
North Bay
Menominee
Marinette
Green I
Peshtigo Pt
Sturgeon Bay
Oconto
Pensaukee
Sherwood Pt
Cave Pt
N Fox I
S Fox I
Little Traverse Bay
Charlevoix
East Jordan
Eastport
N Manitou I
S Manitou I
Leland
Pyramid Pt
Sleeping Bear Pt
Glen Lake
Traverse City
Torch Lake
Elk L
Point Betsie
Crystal L
Frankfort
Arcadia
Deepest Sounding 154
Big Suamico R
Duck Creek
Green Bay
De Pere
Fox River
Algoma
Kewaunee R
Kewaunee
E Twin R
W Twin R
Two Rivers
Manitowoc R
Manitowoc
Portage Lake
Big Manistee River
Manistee
Big Sable River
Hamlin Lake
Big Sable Pt
Ludington
Pentwater
Little Sable Pt
White R
Montague
Wolf River
New London
Kaukauna
Appleton
Menasha
Neenah
Lake Poygan
Winneconne
Fox River
Oshkosh
LAKE WINNEBAGO
Fond du lac
Green Lake
Lake Apuckawa
Pigeon River
Sheboygan
Sheboygan River
Portage
Wisconsin River
Port Washington
WARNING
Unexploded ordnance has been found along the western shore of Lake Michigan



12

Note: Chart grid lines are aligned with true north.


Joins page 7
GREAT LAKES DRAINAGE BASIN LIMIT
Navigation Locks. Regulating works and power diversions.
QUEBEC
ONTARIO
Var 12° W
Sturgeon River
Sturgeon Falls
North Bay
Mattawa R
Mattawa
Ottawa
Rutherglen
Cliff
LAKE NIPISSING
Bruce Mines
Thessalon
Blind River
Serpent River
Spanish River
Mississagi I
Sulphur I
Grant Is
Darch I
NORTH CHANNEL
Vidal I
Clapperton I
Clapperton Channel
West Bay
Drummond Island
Cockburn Island
Cape Robert
Barrie I
Gore Bay
Kagawong
Little Current
Killarney
Badgeley I
Squaw I
French River
Key Harbour
Gull I
Bustard Is
Henvey Inlet
Byng Inlet
MANITOULIN ISLAND
Manitou Lake
Manitowaning Bay
Manitowaning
Providence Bay
South Bay
Cape Smith
Rabbit I
Club I
Lonely I
Grand Bank
Dawson Rock
Western Duck I
Great Duck I
Harbor
Pte au Baril
GEORGIAN BAY
South Baymouth
Owen Channel
Fitzwilliam I
Fitzwilliam Channel
Main Channel
Cove
Halfmoon I
Yeo I
Snug Hbr
Parry Sound
Parry I
Depot Harbour
Sandy I
Presque Isle
Stoneport
Grand Lake
Long Lake
Middle I
Rockport
Mac Gregor Channel
Cape Hurd
Cabot Head
BRUCE PENINSULA
Western Is
Alpena
Thunder Bay I
Thunder Bay
North Point
Deepest Sounding
Lion's Head
Cape Dundas
Cape Paulet
Christian I
Swift Rapids
Sparrow Lake
Severn River
Port Severn
Sturgeon Bay
Lake Couchiching
Orillia
Port Mc Nicol
Midland
Ossineke
South Pt
Six Fathom Bank
Fishing Islands
Wiarton
Cape Rich
Meaford
Owen Sound
NOTTAWASAGA BAY
Thornbury
Beaver River
Bighead River
Collingwood
Sturgeon Pt
Harrisville
Pine River
Six Fathom Scarp
Manitoulin Basin
Lipperwa
Van Etten Lake
Sable River
Oscoda
Au Sable Pt
East Tawas
Tawas City
Tawas Pt
Alabaster
Gres River
Pt Lookout
Gravelly Shl
Charity I
Port Austin Reef
Pte aux Barques
Port Austin
Pt au Gres
Sand Pt
Caseville
Port Crescent
Port Hope
Harbor Beach
SAGINAW BAY
Bay Port
Sebewaing
Pigeon River
Fish Pt
Port Sanilac
Southampton
Port Elgin
Macpherson Pt
Kincardine
Point Clark
Port Albert
Goderich
Maitland River
Bayfield
Pottawatomi River
Beaverton
Lindsay
Port Perry
LAKE SIMCOE
Barrie
Kirkfield
TRENT CANAL
Whitby
TORONTO
Port Credit
Clarkson
Oakville
Bronte
Joins page 19
Joins page 14



14

Note: Chart grid lines are aligned with true north.


Joins page 9
Joins page 21
Q U E B E C
O N T A R I O
Var 14° W
Var 15° W (2002)
Var 16° W
47°
46°
45°
44°
43°
Fort William
Black River
Allumette Island
Pembroke
Calumet I
Bryson
Portage du Fort
Ottawa River
Arnprior
Sand Pt
Mohr
Quyon
Chelsea
Aylmer
Hull
OTTAWA
Gatineau Mills
Gatineau River
Britannia Bay
Mississippi River
Deschenes
Angers
Lievre River
Rockland
Thurso
Wendover
Montebello
L'Original
Hawkesbury
Rouge River
Carillon
North River
Rigaud
St Placide
St Eustache
Terrebonne
ILE JESUS
MONTREAL
Lachine
Como
Ile Perrot
Valleyfield
Beauharnois
Chateauguay
Fort Chambly
Longueuil
St Lambert
St Hilaire
St Mathias
Boucherville
Varennes
Vercheres
Contrecoeur
St Ours
Sorel
Berthierville
Lake St Peter
St Jean
Richelieu River
St Valentin
Mississquoi Bay
Rouses Pt
Coopersville
CANADA
UNITED STATES
Moses-Saunders and Long Sault Dams
Cornwall
Lancaster
Williamstown
Delisle
Sutherland
Nation River
Kemptville
Merrickville
Rideau River
Smiths Falls
Iroquois Dam
Morrisburg
Iroquois
Cardinal
Prescott
Ogdensburg
Waddington
Grass River
Massena
Raquette River
St Regis
Little Salmon River
Salmon River
Brockville
Newboro
Rideau Lake
Morristown
Black Lake
Chippewa Bay
Alexandria Bay
Ogdensburg
Gananoque
Rideau Canal
Kingston
Wolfe I
Clayton
Napanee
Belleville
Deseronto
Amherst
QUINTE
BAY OF
Picton
MURRAY CANAL
Cape Vincent
Chaumont
Dexter
Pt Peninsula
Galloo I
Stony I
Sackets Harbor
Henderson Harbor
Watertown
Black River
Indian River
Oswegatchie River
Pr Edward Pt
Nine Mile Pt
Oswego
Oswego River
Fulton
Little Sodus Bay
Fair Haven
Port Bay
Sodus Bay
Pulteneyville
Phoenix
Three Rivers
Caughdenoy
Cleveland
Rome
Oneida Lake
Sylvan
Canada
PLATTSBURGH
Saranac River
Valcour
Port Kent
Ausable River
Port Douglass
Willsboro
Essex
Westport
Port Henry
Crown Pt
Ticonderoga
Schroon Lake
Brant Lake
Indian Lake
Hudson River
Schroon River
LAKE GEORGE
Whitehall
Comstock
Lake George
Glens Falls
Ft Edward
Ft Miller
Champlain Canal
Saratoga Lake
CHAMPLAIN
VERMONT
Burlington
15800
15900
16100
16200
16300
60200
60000
28900
28600
45400
45440
9960-W-16000
9960-X-28600
9960-W-16300
9960-X-28900
9960-Z-60000
9960-Y-15900
9960-Y-15700
Deepest Sounding
EXT.

Joins page 10

INTERNATIONA ... itional Boundary Line as shown hereon is in accordance w ... gust 15, 1913 by the International Waterways Commission under Article IV of the treaty between the United States of America and the United Kingdom of Great Britain and Ireland signed April 11, 1908.

HYDROGRAPHY. Contours are shown in fathoms. Depths to 10 fathoms are tinted blue.

PLANES OF REFERENCE OF THIS CHART ..... (Low Water Datum)
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

LAKE SUPERIOR

PLANE OF REFERENCE (Low Water Datum) ..... 601.1 ft.

LAKE MICHIGAN

PLANE OF REFERENCE (Low Water Datum) ..... 577.5 ft.

LAKE HURON

PLANE OF REFERENCE (Low Water Datum) ..... 577.5 ft.

LAKE ERIE

PLANE OF REFERENCE (Low Water Datum) ..... 569.2 ft.

LAKE ONTARIO

PLANE OF REFERENCE (Low Water Datum) ..... 243.3 ft.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 do not require conversion to NAD 83 for plotting on this chart.

MAGNETIC VARIATION

Magnetic variation curves are for 2002 derived from 2000 World Magnetic Model and accompanying secular change. If annual change is in same direction as variation it is additive and the variation is increasing. If annual change is opposite in direction to variation it is subtractive and the variation is decreasing. Places of large local disturbances are indicated in magenta thus: ⊙

DISTANCES—STATUTE AND NAUTICAL MILES

	Statute / Nautical	Quebec	Montreal	Tibbetts Point	Toronto	Port Weller	Port Colborne	Buffalo	Cleveland	Toledo	Detroit	Port Huron	Bay City	De Tour	Sault Ste Marie	Thunder Bay	Duluth	Mackinac Bridge	Milwaukee	Chicago
Quebec	Statute		157	347	506	504	531	553	691	768	775	837	999	1061	1106	1379	1501	1084	1343	1408
	Nautical		136	302	440	438	461	481	600	667	673	727	868	922	961	1198	1304	942	1167	1224
Montreal	Statute			190	349	347	374	396	534	611	618	680	842	904	949	1222	1344	927	1186	1251
	Nautical			165	303	302	325	344	464	531	537	591	732	786	825	1062	1168	806	1031	1087
Tibbetts Point	Statute				159	157	184	206	344	421	428	490	652	714	759	1032	1154	737	996	1061
	Nautical				138	136	160	179	299	366	372	426	567	620	660	897	1003	640	866	922
Toronto	Statute					28	55	77	215	292	299	361	523	585	630	903	1025	608	867	932
	Nautical					24	48	67	187	254	260	314	454	508	547	785	891	528	753	810
Port Weller	Statute						27	49	187	264	271	333	495	557	602	875	997	580	839	904
	Nautical						23	43	162	229	235	289	430	484	523	760	866	504	729	786
Port Colborne	Statute							22	160	237	244	306	468	530	575	848	970	553	812	877
	Nautical							19	139	206	212	266	407	461	500	737	843	481	706	762
Buffalo	Statute								176	254	261	322	484	547	592	864	986	569	828	893
	Nautical								153	221	227	280	421	475	514	751	857	494	720	776
Cleveland	Statute									96	108	170	331	394	438	711	833	417	675	740
	Nautical									83	94	148	288	342	381	618	724	362	587	643
Toledo	Statute										54	116	278	340	385	658	781	363	622	688
	Nautical										47	101	242	295	335	572	679	315	541	598
Detroit	Statute											62	224	286	331	604	726	309	568	633
	Nautical											54	195	249	288	525	631	269	494	550
Port Huron	Statute												162	224	269	541	664	247	506	571
	Nautical												141	195	234	470	577	215	440	496
Bay City	Statute													187	232	504	627	210	468	534
	Nautical													162	202	438	545	182	407	464
De Tour	Statute														45	317	439	45	304	369
	Nautical														39	275	381	39	264	321
Sault Ste Marie	Statute															272	394	90	349	414
	Nautical															236	342	78	303	360
Thunder Bay	Statute																194	362	621	686
	Nautical																169	315	540	596
Duluth	Statute																	485	743	808
	Nautical																	421	646	702
Mackinac Bridge	Statute																		259	324
	Nautical																		225	282
Milwaukee	Statute																			85
	Nautical																			74
Chicago																				

NOTE

The above table gives the shortest navigable distances between principal points on the Great Lakes to the nearest even mile; fractions of 1/2 mile or more being taken as a full mile and those under the half dropped. Distances on the St. Lawrence River are measured from the entrance to the St. Lawrence Seaway located at Montreal Harbor. For complete mileage tables of the Great Lakes and their connecting waterways, see the Great Lakes Pilot.

CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

43° 42° 41° 40°

93° 92° 91° 90°

27th Ed., Oct. / 02 ■ Corrected through NM Oct. 26/02
Corrected through LNM Oct. 15/02

14500

LORAN-C OVERPRINTED

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Imagery and Mapping Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

This nautical chart has been designed to promote safe navigatio... Ocean Service encourages users to submit corrections, additions, o... improving this chart to the Chief, Marine Chart Division (N/CS2), ... Service, NOAA, Silver Spring, Maryland 20910-3282.

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Note: Chart grid lines are aligned with true north.

SOUNDINGS IN FATHOMS

Joins page 23

DINGS IN FATHOMS

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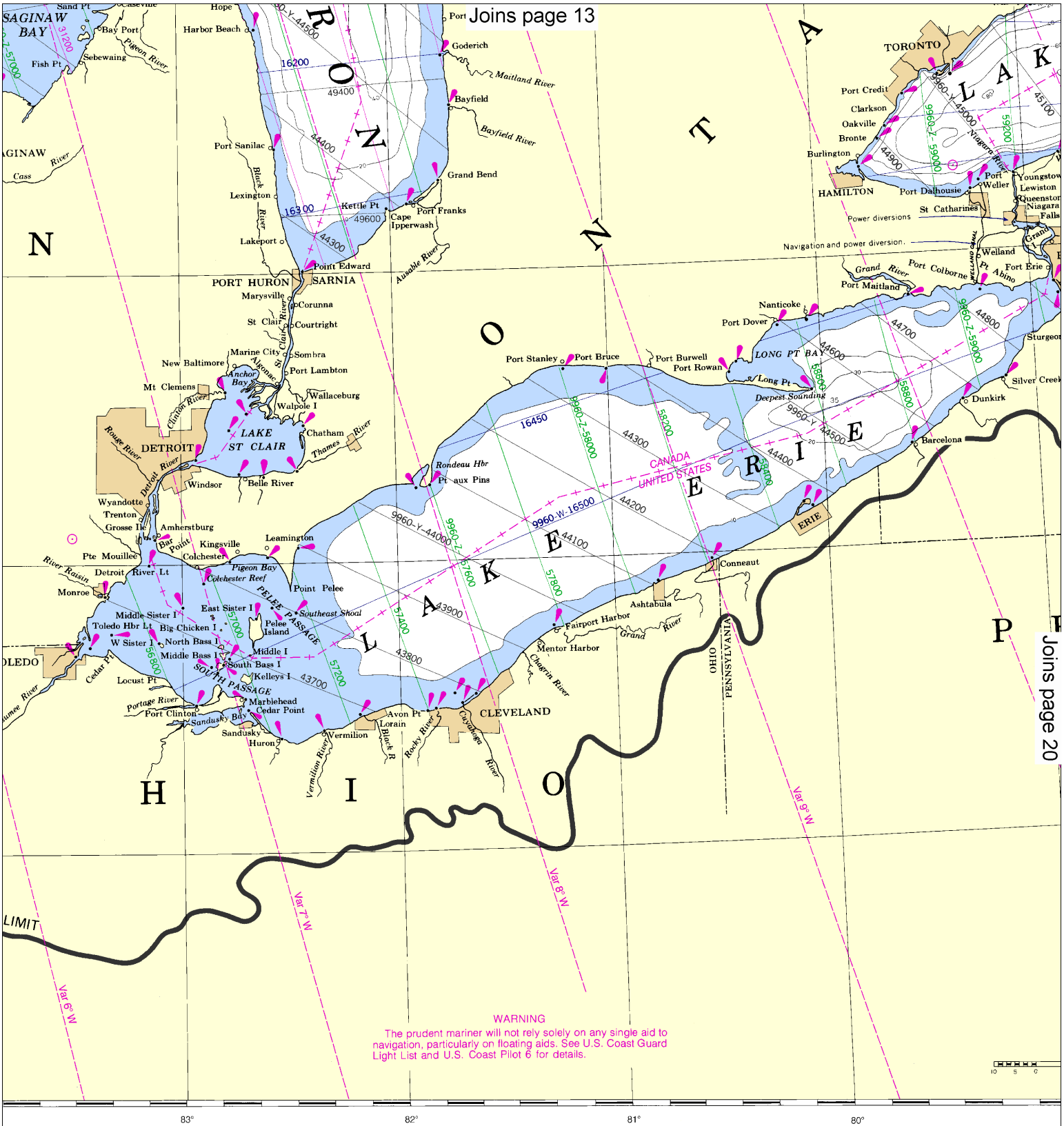
Note: Chart grid lines are aligned with true north.



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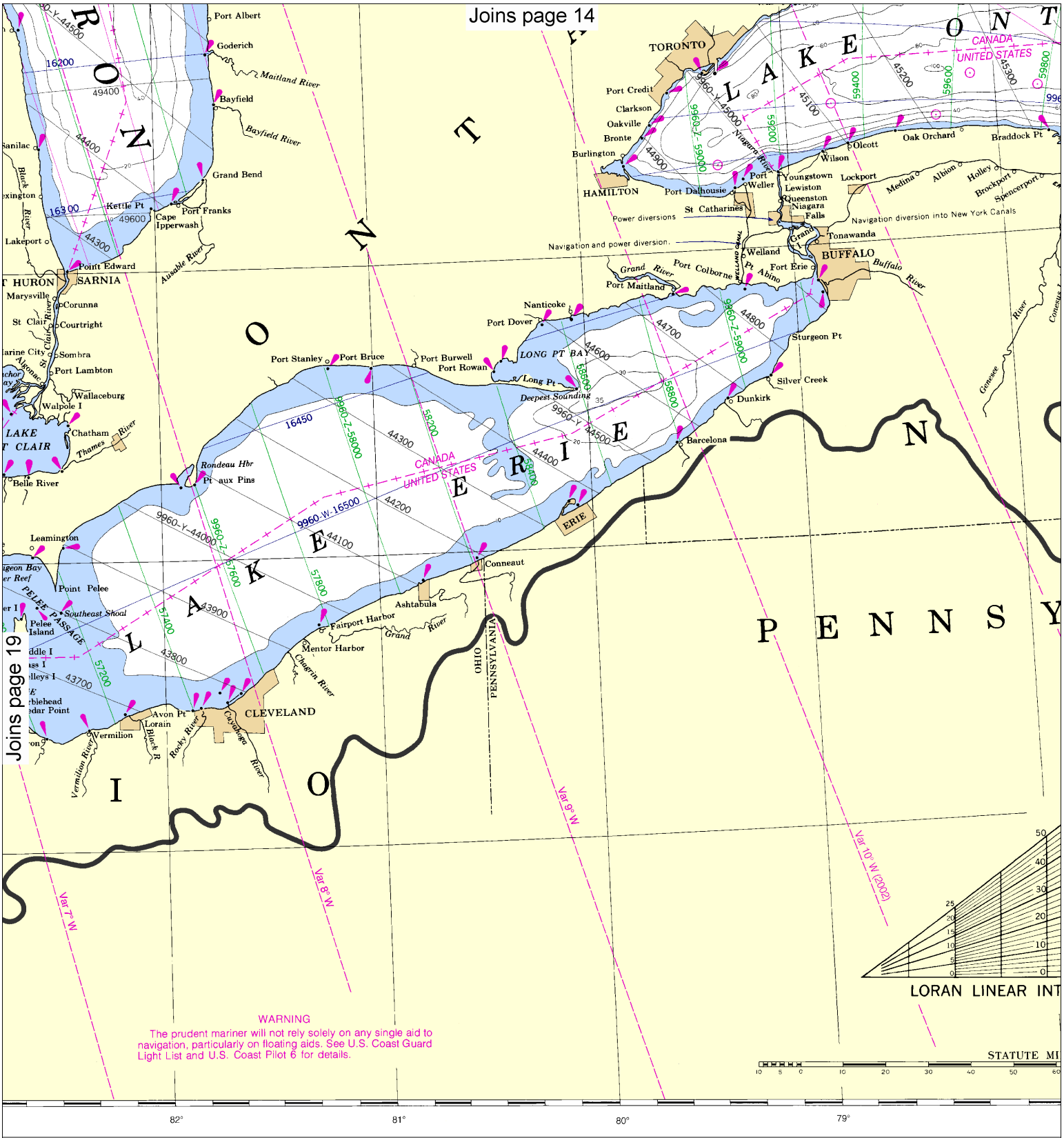

Note: Chart grid lines are aligned with true north.

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Great Lakes

SOUNDINGS IN FATHOMS - SCALE 1:1,500,000

14500

LORAN-C OVERPRINTED

Joins page 27

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!

All Hazards NOAA Weather Radio NOAA's National Weather Service

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
http://www.nws.noaa.gov/nwr/

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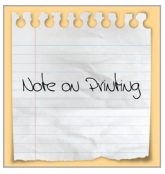

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